Mutually reactive groups

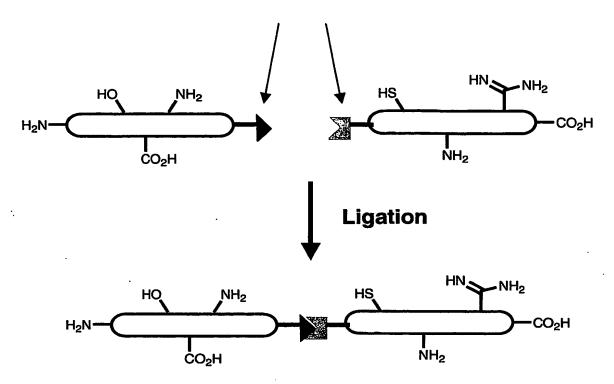


Figure 1 General principle of chemical ligation.

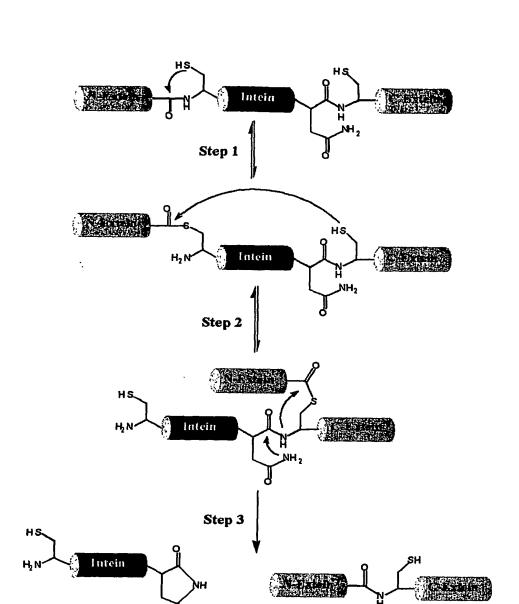


Figure 2 Mechanism of protein splicing

Clone Gene into Engineered Intein Expression Vector

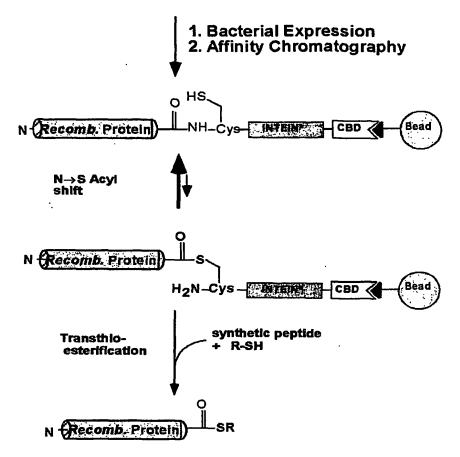


Figure 3 Generation of Recombinant C-terminal Thioester Proteins

Synthetic or recombinant peptide / protein α -thioester

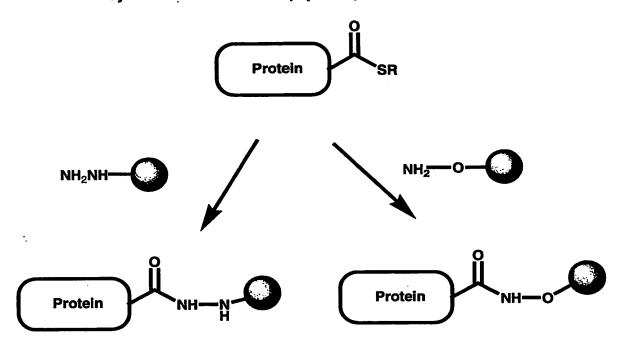
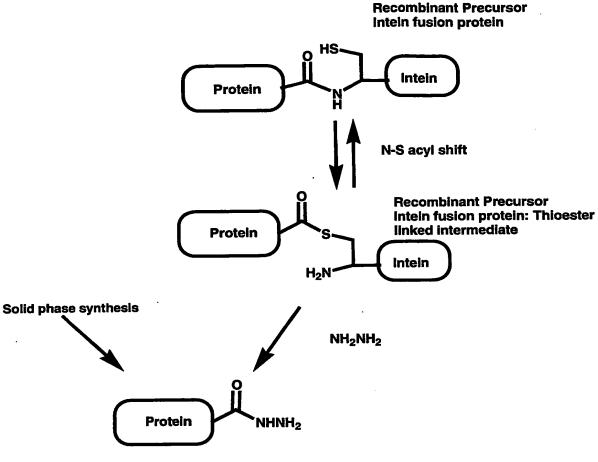


Figure 4 Ligation of protein and peptide thioesters with hydrazine and aminooxy containing entities such as labels, peptides and proteins.



Synthetic or recombinant peptide / protein hydrazide

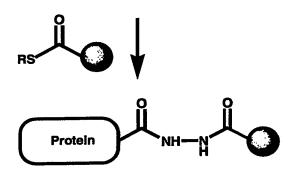
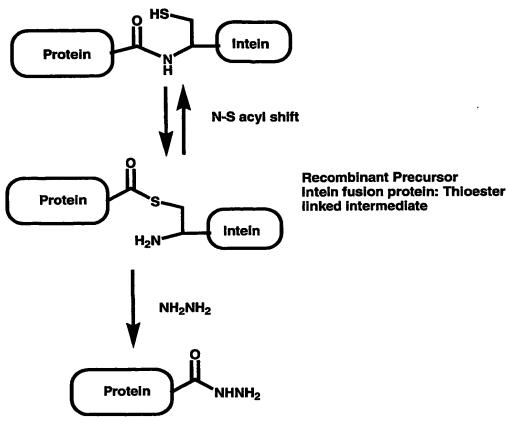


Figure 5 Generation of synthetic and recombinant peptide hydrazides for ligation with thioester containing molecules

Recombinant Precursor Intein fusion protein



Recombinant peptide / protein hydrazide



Ligation of Recombinant protein hydrazide to aldehyde (R=H) or ketone containing entities such labels, peptides or proteins

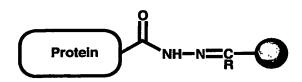


Figure 6 Generation of recombinant peptide hydrazides for ligation with aldehyde and ketone containing molecules

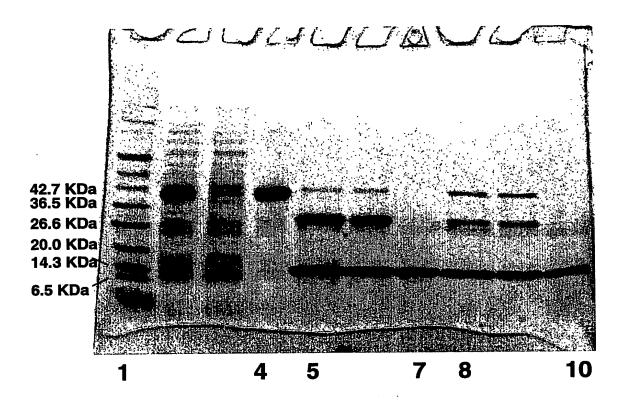


Figure 7

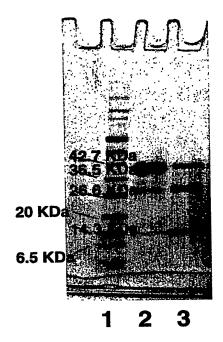


Figure 8

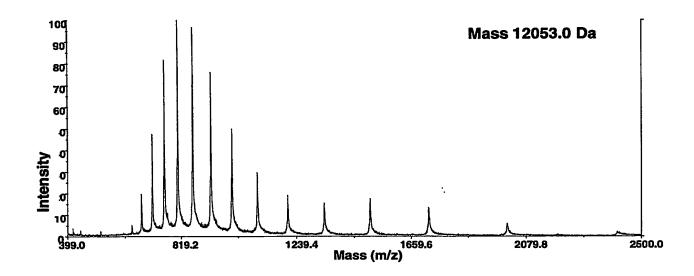


Figure 9. ESMS spectrum of the C-terminal hydrazide derivative of Grb2-SH2

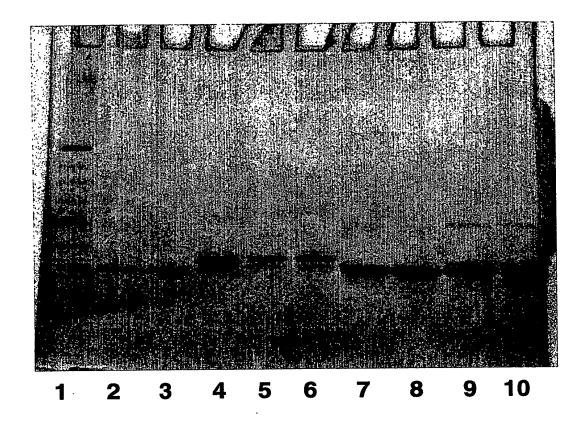


Figure 10. SDS-PAGE analysis of the reaction between synthetic ketone containing peptide CH3COCO-myc with Grb2-SH2 – C-terminal hydrazide and Cytochrome C.

Figure 11 Structure of CH₃COCO-Lys(Fl).

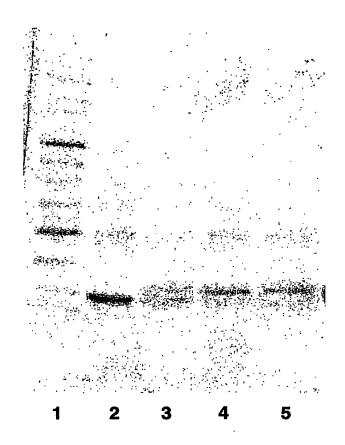


Figure 12

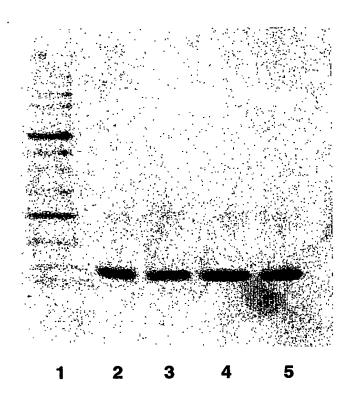


Figure 13

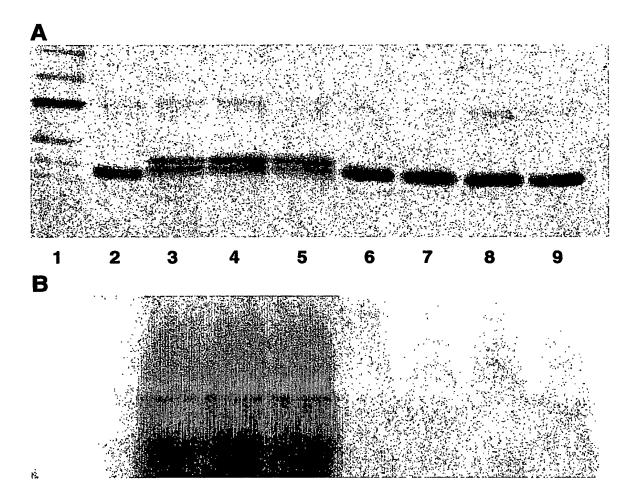


Figure 14

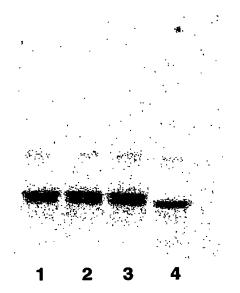


Figure 15.